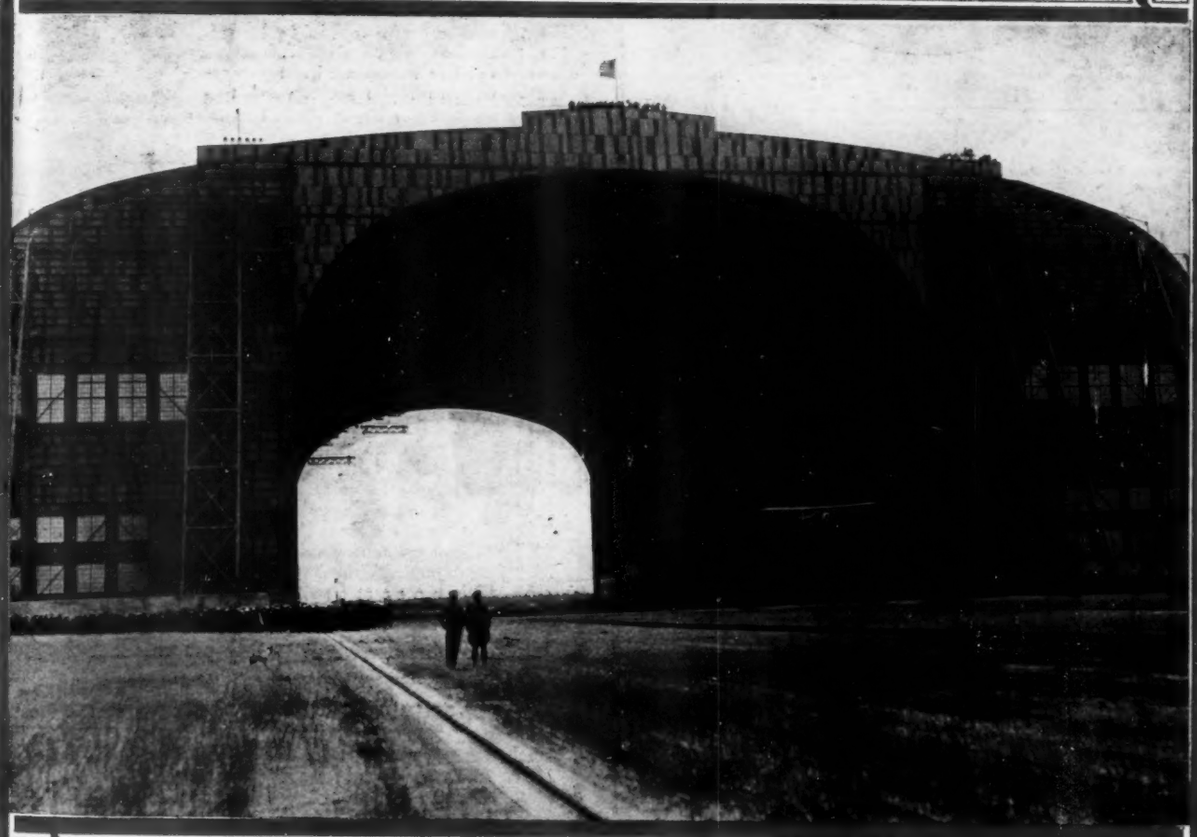
AVIATION

The Oldest American Aeronautical Magazine

JUNE 16, 1924 Issued Weekly PRICE 10 CENTS



Lieut. Al Williams, U.S.N., flying a VE7 plane through the airship hangar at Lakehurst

VOLUME XVI

NUMBER 24

SPECIAL FEATURES

SHENANDOAH MAKES 1000 MILE FLIGHT

THE LAKEHURST NAVAL AIR DEMONSTRATION

THE FRENCH AND GERMAN AIRCRAFT INDUSTRIES

WELDED STEEL TUBING IN FUSELAGE CONSTRUCTION

GARDNER PUBLISHING CO., INC.
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JOHNSON AIRPLANE & SUPPLY CO.
DAYTON, OHIO

JUNE 16, 1924

AVIATION

VOL. XVI. NO. 24

Published every Monday

CONTENTS

Editorials	641	Light Planes and Gliders	646
Welded Steel Tubing in Fuselage Construction	642	Martyrs to Science	647
The French and German Aircraft Industries	643	Glenn Martin Gets Navy Contract	647
Running Speed of British Engines	644	American World Flight	647
Dixmude Farewell Note Found	644	Doisy Reaches Japan	647
Death of Prince Bonaparte	644	Lisbon to Macao Flight	647
Lakehurst Naval Air Demonstration	645	Airports and Airways	648
Shenandoah Flies 1000 Miles	645	United States Air Forces	652

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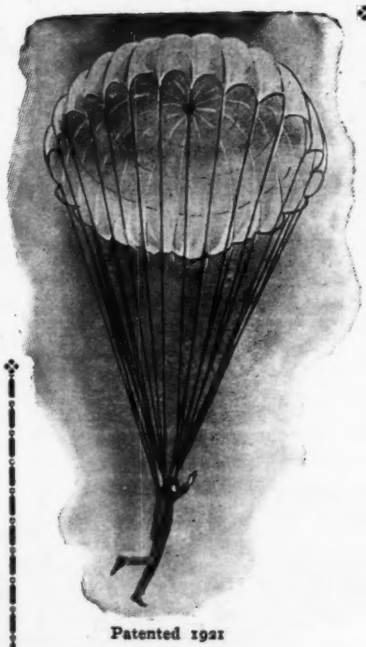

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Vol. XVI JUNE 16, 1924 No. 24

Rum Defense vs. Air Defense

WHEN the public learns that almost an identical amount of money has been appropriated by Congress for the Coast Guard Service in connection with protecting the country against rum runners as was appropriated for the Air Service for the country's protection against hostile air raids, the disproportionate condition of things will become evident.

The 1924 Deficiency Act contains the following clause:

"For additional motor boats and their equipment for the use of the Coast Guard in enforcing the laws of the United States and in performing the duties with which the Coast Guard is charged, to be constructed or purchased in the discretion of the Secretary of the Treasury, and for repairs or alterations to or for equipping and placing in commission vessels or boats transferred from the Navy Department to the Treasury Department for the use of the Coast Guard, $12,194,900, to remain available until June 30, 1925."

We cannot lay the blame for this anomalous situation on Congress. The anti-rum appropriation was asked for by the Secretary of the Treasury. If the Secretary of War asks for only twelve million dollars for the Air Service, Congress can not be expected to grant more than that amount. Further comment on the comparative importance of these two appropriations really seems superfluous.

It is not inopportune, however, to point out to the aircraft industry that it appears to be overlooking a most interesting field of activity in not demonstrating the evident usefulness of seaplanes for the prompt detection and apprehension of rum runners. It is no secret whatsoever that numerous rum runners are quite generally using seaplanes for scouting purposes, that is, to detect in time the moves of Coast Guard vessels, and so escape capture. While a few planes appear to have also been used occasionally by Internal Revenue agents in the anti-rum war, from such information as is available it appears that most of these planes were built at about the time the Great Flood of Jennies occurred. It would therefore seem that with the new appropriation which the Coast Guard has now available, our manufacturers might find it useful to demonstrate some really up to date aircraft wherewith the chasing of bootleggers could be accomplished with more dispatch and certainty than is now practiced.

The Round the World Flights

THE round the world flights are getting so much deserved publicity in the daily papers that we do not believe our readers expect us to review for them in detail week after week the progress of these enterprises. The space available in the editorial columns of AVIATION is, incidentally, so restricted by business conditions that we cannot in any case give more than a brief weekly summary of these flights.

From a certain type of mind we get some peculiar reactions to the world flights. A common query is: "What is the practical good of them?"

To this more than one answer can be given. In the first place, certain definite knowledge has already been gained regarding the practicability of some portions of the round the world flying route of the American and British expeditions.

American experience seems to show that it is very difficult, if not altogether impossible, to fly in the Aleutian Islands during the spring season. Maclaren's experience, reinforced by Doisy's, on the other hand, seems to prove quite conclusively that fabric covered wings do not stand up in the terrific heat of India. If the American world fliers confirm this experience, it will indicate the necessity of having metal covered wings for tropical climates.

But these items are not the only valuable lessons which the world flights are bringing forth. There is, for instance, the question of national prestige, with the possibility of sale of American aircraft to countries which have no manufacturers of their own. The French understood this angle so well that after they had given up the idea of a world flight for financial reasons, they organized the spectacular dash of Pelletier Doisy to the Far East.

There is also the fact that our own world flight is holding the interest of the American public to an extent which is no mean accomplishment for aviation. All these factors are alone sufficient to justify the enterprise from a practical viewpoint, but there is furthermore a philosophical justification in the accomplishment of something that has never been done before. This may not appeal to the practical minded, but it is none the less of considerable importance as a "lesson of energy."

There seems to be a general impression among the public that our world flight is a race against the British. General Patrick has officially denied this implication, stating that our world flight was undertaken to show the possibility of such a flight from the commercial viewpoint and to chart new flying routes. The plane which will have circled the globe without any essential replacement of parts will furthermore furnish proof not only of unusual strength and reliability, but also of excellent skill and judgment on the part of its pilot.

Interesting Comparisons

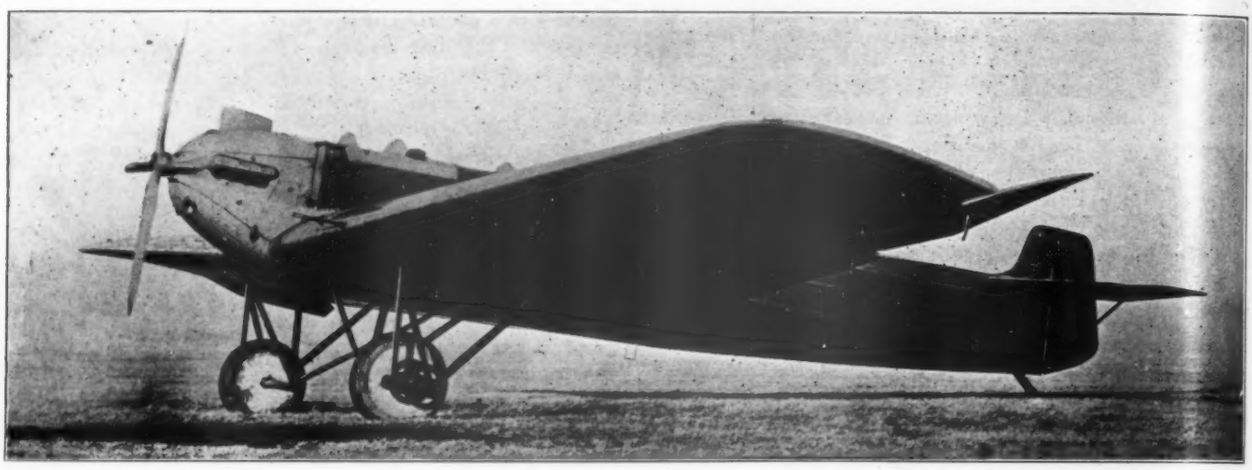
THE comparative study of the French and German aircraft industries with reference to their governments' stand in aeronautical development and production work, which appears in this issue, will be found highly instructive. It will be seen that in these countries not only is everything done to foster the industry as a self-supporting unit, but also that official interference is reduced to a minimum.

Welded Steel Tubing in Fuselage Construction

Abstract of a Lecture Given by A. H. G. Fokker before the British Institution of Aeronautical Engineers

The use of fuselages built up of welded steel tubing in place of the orthodox wire-braced wooden lattice girder construction made considerable headway in this country during the past year. This will be readily appreciated, considering that such well known machines as the Boeing Naval Training Plane, the Curtiss Pursuit Plane and CS1 "Three-Purpose" Plane, the Douglas Torpedo Plane and World Cruiser, and the Huff Daland Petrel and TW5 Army Training Plane all have welded steel tube fuselages.

This new development in American airplane construction has largely been due to the successful demonstration in this country of various Fokker airplanes, all of which exclusively have steel tube fuselages. In view of this fact considerable interest attaches to a lecture given some time ago before the (British) Institution of Aeronautical Engineers by Anthony Fokker, the Dutch aircraft constructor, on this type of fuselage construction,



One of the newest Fokker planes, a convertible bomber and torpedo dropper built for the Netherlands air force. The engine is a 450 hp. Napier Lion, and the small space it occupies in the fuselage is noteworthy. The plane has a high speed of 115 mi./hr. and carries a load of 5000 lb. The Argentine and Portuguese world cruisers are of a similar type

The Early Beginnings

Mr. Fokker built his first all steel fuselage in 1911, and it is worthy of note that in principle nothing has since been changed in this type of construction by the Dutch aircraft constructor. Fundamentally, the Fokker type fuselage is built up of steel tube longerons to which are welded vertical and horizontal steel tube struts, and which are cross braced by wires held taut by turnbuckles. American practice departs in some cases from the Fokker type of fuselage in that the wire bracing is displaced by round section tie rods, the ends of which are threaded and so fit directly into a screw thread fitting, whereby the use of turnbuckles and wire termina's is eliminated.

Returning now to Mr. Fokker's paper, the lecturer stated that in the early stages of the evolution of this form of fuselage construction several difficulties presented themselves, chief among which was that of attaching the bracing wires. Several solutions were experimented with. At first a steel plate was let into the angle between the tubes and welded in place, thus allowing the female end of the turnbuckle to be attached by a simple bolt. Then another system was tried, which consisted in welding two steel plates on the outside of the tubes so as to accommodate a male end turnbuckle between them. Finally a small quadrant or sector of thick-walled steel tube was welded into the angle, so that the bracing wire may be passed through it. This, the lecturer stated, was the form adopted as standard on all Fokker machines at present, the diagonal bracing being in the form of a double wire drawn through the quadrant in the corner and tightened with one turnbuckle only.

At first very high tensile strength wire was used, but it was found difficult to handle this wire, which was very sensitive to the manner in which the loops at the ends of the wires were made. Once or twice wires having a factor of safety of 25 broke during ordinary flight, showing that the wire had been misused during the rigging of the machine. Later a more flexible wire, with a lower ultimate tensile strength, was used, which was found satisfactory. Mr. Fokker suggested that instead of the tubular quadrant a complete solid ring might be used, which had the advantage of strengthening the lower part of the compression struts.

On the subject of joining two tubes of different diameters together, the lecturer stated that this was simply done by inserting the end of the smaller tube into the larger one and welding the outer seam. To join two tubes of the same diameter a small length of tube of smaller diameter was inserted in the ends of the larger and the whole welded along the seam. In the case of tubes working in tension, the butt joint of the outer tubes was made perpendicular to the axis of the tubes. For compression struts such a joint was made with the joint of an angle, the reason being that it had been found that compression struts were in a better condition when the annealed area was not at right angles to the axis. Failures, the lecturer said, never occurred in the joint itself, but in the material adjoining the weld, where the material had been annealed by the heat action of the acetylene flame.

Interesting Problems

Referring to the problem of transferring high local stresses at right angles or nearly so to the walls of tubes, such as occur at the point of attachment of the landing gear struts, Mr. Fokker indicated two methods of doing this. In one the cup of the ball-and-socket joint has a long stalk which passes through the longeron tube and diagonally through the compression strut, being welded to both. The second form of strengthening a corner fitting consists in welding a strong plate on to it to avoid buckling.

The main point of welded steel tube construction was indicated by the lecturer as depending upon the gradual transmission of forces from one tube to the other or to a fitting, and upon the avoidance of all sharp transitions.

The material employed was another important factor, and

the lecturer quoted from the McCook Field report on tests with the Fokker DVII, which stated that "Good weldable steel conforms almost to steel specification 1-02-0, containing 0.15 to 0.35 per cent carbon, 0.3 to 0.4 per cent manganese, 0.045 per cent phosphorus, and about 0.1 per cent sulphur." He thought the strong dislike of welding in England and France must be attributed to the use of unsuitable materials, and stated that the steels called for in the English specification were unsuitable for his form of construction.

With regard to the difficulty of welding, the lecturer's experience had been that during the War of 1914-18 more than 80 per cent of the personnel employed were women, who very quickly learned the work. It was stated that a good guide to the quality of welded work was formed by the speed at which the work was done. Quick welding was good welding, while slow welding was bad because it implied either burning or irregular work. Over-speeding was impossible, as it showed immediately in the appearance of the weld in the form of irregularities and openings. The rectangular portion of a fuselage was very easy to weld. Greater skill was required in the forward part, where the structure was triangulated. Consequently this part of the work was done by the more skilled workmen.

The procedure was outlined by the lecturer as follows: On large tables on which the shapes of the sides of the fuselage have been drawn out, the tubes are cut to length and put together temporarily, and are held in position between angle irons. They are then point-welded together and the fuselage sides are removed and the joints finished off. The cross tubes are next welded in place and the small quadrants in the corners are inserted. The fuselage is then placed in a rigging jig, the double wires put in and tightened up, and the fuselage structure is complete.

An advantage claimed by Mr. Fokker for his form of construction is that the design may be changed easily at any time as regards dimensions. Also he claimed the construction is easy to inspect, as after removing the fabric every joint is visible from all sides, as there are no fittings to be removed.

The lecturer pointed out, in proof of the satisfactory behavior of his particular form of welded steel tube construction, that out of more than 10,000 airplanes not one accident had happened which could be ascribed to the welding failing. Cracks in the tubes had been observed, but these developed gradually and not suddenly, and in every case it was proved that the damaged parts had, for some reason or other, been subject to higher local stress than the normal for which the structure had been calculated. As an interesting fact he mentioned that if a break in the structure occurred it was always found that it was never the welded joint itself that failed, but invariably at a point in the tube itself about ¼ or ½ in. from the weld.

A further advantage of the welded tube fuselage upon which the lecturer laid stress was that in the case of crashes the shock was broken gradually by the steel tubes bending. The structure kept together without splintering, the tubes bending, but holding together to the last.

The French and German Aircraft Industries

With Special Reference to their Dealings with the Governments

The relationship of governments to aircraft is becoming more and more a matter of vital importance to everyone interested in the future relation of air power to national defense. To a great extent the problem in all countries is similar, but the solution has followed different methods. Commander Bird of the Supermarine Company has recently given a view of the relationship of the British Government with the British constructors.

To secure a similar point of view regarding the French and German situation a search has been made of various articles in aeronautical papers and information secured from the constructors of France and Germany.

The French System

In France an Aeronautical Chamber of Commerce, known as the Chambre Syndicale des Industries Aeronautiques, was established in January, 1908. As a result, one of the great advantages accruing to France in the early stages of the war was the fact that the aeronautical industry was organized and that the organization already had been in successful operation over a period of six years. Due to this fact and also to the recognition the Government had given aviation during this period, there had been established dual recognition based upon close acquaintance and mutual respect. It may be stated in general terms that aerial questions in France, relating to types of machines and sources of supply, are practically all directed by the organized industry and to this fact the French attribute very largely their success in the aeronautic field.

The advice of the Chambre Syndicale, speaking for the industry, has been sought and followed as to the disposal of surplus aircraft after the war period and in like manner the organized industry's advice and wishes regarding Government encouragement of foreign sales has been followed, not only to the great benefit of the industry but to the Government.

No Government Competition

The Government does not compete with the industry. To the contrary, the Government's entire conception of national aviation is predicated upon the necessity for maintaining the aircraft industry as the basis of the whole scheme of national security and commercial flying expansion. It is in close accord with the organized industry and the individual units for the purpose of encouraging development in design, engineering and construction. Full recognition is given by the Government to the value of research and design and proprietary rights are rigidly recognized and adhered to.

Production orders are allocated among the various units in the industry in accordance with their several ratings as to facilities, capacity and personnel. Some of the larger factories in the last two or three years have employed 2,000 men each. The French Government will not lend any of its facilities, nor will it participate in any air meets, or exhibitions or shows that are not first sanctioned by the Chambre Syndicale.

The French Government recognizes as the primary principle of aeronautical development that it is its duty to provide for the establishment of an aeronautical industry upon a firm, profitable basis. As an indication of the success of its efforts in this direction and the strength and prosperity of the industry it is only necessary to examine the French aeronautical trade papers and compare them with those of other countries. The trade papers in France are self-supporting from advertising revenue. *The French Government does not publish, nor does it encourage the publication of a service aviation paper supported by advertising revenue drawn from the industry and thus competing with the trade papers.*

All of the favorable conditions that have been established in England between the industry and the government have been enjoyed in France in greater degree.

The French "Official List"

In France there are twenty-five constructors of airplanes and nineteen manufacturers of motors on the official list. In addition there are about 100 "adherents" made up of manufacturers of parts and supplies and producers and dealers in raw materials. The latter group, as well as the manufacturers of planes and motors, is recognized as a component part of the industry. The Government does not compete with the industry in engineering, design or manufacture. The Technical Division of the Air Service attends to inspection and testing, and does a certain amount of experimental work having to do with the application of ordnance or other military equipment to aircraft.

In France, the Government point of view with reference to national security and economic development is predicated on the existence of strong aviation the foundation of which is a healthy private aeronautical industry. The Government has provided laws for the development of civil aviation and voted large subsidies for their maintenance. As an aid to civil aviation, the Government has also placed important orders for the development of various types of commercial aerial transports; has laid out airways; and established terminals; has provided lighting and radio facilities, and supplied a special meteorological service, etc., with a view to popularizing aerial transport and reducing the cost of operation to an economical basis.

The German Air Industry

In Germany, owing to the abolition of a national air force and certain other restrictions regarding civil aviation imposed by the Treaty of Versailles and by the Council of Ambassadors' so-called "Nine Points," the aeronautical problem is, of course, vastly different. But, being deprived of a military aviation, Germany has turned all her energy toward fostering civil air transport, and this is being done according to a very clear and well thought out plan.

Before and during the war there were two aeronautical trade associations in Germany, one representing the manufacturers of heavier-than-air craft and the other the airship constructors. After the war and during the period of demobilization and liquidation of war establishments, these two trade associations were consolidated under the name of Verband Deutscher Luftfahrzeug-Industrialler.

After the consolidation of the industry into the above organization the principal problems that came up for consideration had to do with the restrictions placed upon aeronautical activities in Germany by the Allies; the problems of liquidation growing out of demobilization of the factories and liquidation of unfilled contracts; and questions growing out of and surrounding consideration of the development of suitable laws designed to encourage, direct and control civil aeronauties, including questions of detail, such as licensing of machines, pilots, establishment of air routes, etc. This latter phase included the licensing of constructors of aircraft on the theory that aircraft for the government or civil use subject third parties on the ground to risk of accident. Therefore, the construction of these planes must be placed in the hands of parties of known competency and responsibility.

Patent Rights

In addition to the above problems the organized industry also gave consideration to the infringement of patent rights during the war period and as a result agreed among themselves that with few exceptions no claims against the several members of the organization would be pressed. In the cases that were not disposed of by mutual agreement, a number were submitted to arbitration rather than to the law courts.

The Government and the organized industry have free exchange of technical information, the industry summarizing and exchanging with the Government all technical data, foreign and domestic and attending to the publication of the same. Whenever the Government wishes information, technical or otherwise, relative to matters aeronautical, either for the purpose of engineering or developemnt of designs or matters of legislation, it makes its request to the industry through the central organization and the latter nominates or suggests of its members, men of known responsibility and competence whom it proposes and designates to act for the industry in making representations to the Government on each occasion as it arises.

Another important function of the organized industry in Germany was to act as arbitrator for the Government among the various units of the industry in fixing and determining the final settlement of all war claims growing out of the cancellation of war contracts and balances due. The German Government would not participate in or encourage flying meets or expositions that were not sanctioned by the industry.

Engineering Establishments

The only governmental aviation publication issued in Germany is the weekly *Nachrichten für Luftfahrer* (Notices to Airmen) which does not contain any advertisements and which is similar to the Notices to Aviators issued by the U. S. Navy.

The German government during the war maintained engineering establishments with facilities for testing all new equipment and for experimentation as far as the adapting of ordnance or other military equipment to aircraft and for research work. Since the war, however, these establishments have been given up. From the very apparent appreciation of the Government of the necessity of fortifying and building a strong private aircraft industry it is regarded as very improbable that the Government will at any time in the future compete with the industry in design, engineering or construction.

It will be seen from the above statements as well as from that made by Commander Bird, that neither in France, England or Germany is there a government sanctioned aeronautical publication, conducted by officers and seeking advertisements from aircraft contractors. An exception may be made to the general rule in the case of Russia where the aeronautical publication of one hundred and fifty pages is obviously under official control.

Running Speeds of British Engines

The approval of engines for British civil aircraft is based on the satisfactory completion by a representative engine of type tests, and the Certificate of Airworthiness of an aircraft is subject to the continued use of the engine in the aircraft under the conditions of power and speed upon which this type approval was granted. As a result of each such type test "maximum" and "normal" engine speeds are laid down. The running of engines at, or in excess of, the maximum permissible speed for more than a few minutes at a time in emergencies, is prohibited, since it inevitably tends to the early deterioration of the engine and increases its liability to breakdown.

In this connection the British Air Ministry has issued the following table, giving the normal and maximum permissible speeds of all British-built airworthy engines:—

Type of Engine	*Rev./Min. Normal*	*Maximum*
BR1, 150 hp.	1,250	1,300
BR2, 200 hp.	1,300	1,350
Gnome Mono	1,250	1,300
Le Rhone, 80 hp.	1,250	1,300
Le Rhone, 110 hp.	1,300	1,350
Beardmore, 120 hp.	1,300	1,400
Beardmore, 160 hp.	1,350	1,450
Green, 35 hp.	1,250	1,300
Green, 100 hp.	1,250	1,300
RR Hawk II	1,500	1,600
Siddeley Puma	1,400	1,500
Sunbeam Dyak	1,200	1,400
RR Falcon III	2,000	2,200
RR Eagle VIII	1,800	1,900
RR Eagle IX	1,800	2,000
RR Condor I and II	1,650	1,800
RR Condor III	1,900	2,100
Sunbeam Maori III	2,100	2,200
Sunbeam Manitou	2,000	2,100
Wolseley Viper	2,000	2,100
Napier Lion	2,000	2,200
Bristol Jupiter IV	1,575	1,750
Bristol Lucifer	1,600	1,760
Bristol Cherub	2,200	2,500
Siddeley Jaguar III	1,500	1,650
Siddeley Lynx	1,620	1,780

Dixmude Farewell Note Found

A bottle found May 18 on the beach at Propriano, southwestern Corsica, contained a farewell note of the ill-fated Dixmude airship crew. The message, written in pencil, read:

"All out of gasoline. We are drifting in a wind storm. Good-by and long live France—Dixmude crew."

The Dixmude, a former German Zeppelin, was turned over to France under the Versailles treaty and was lost last Christmas while homeward bound on an extended practice cruise.

Death of Prince Bonaparte

Prince Roland Bonaparte, president of the International Aeronautic Federation (F.A.I.) recently died in Paris after a prolonged illness. The deceased was sixty-six years old and had been president of the F.A.I. since its foundation.

In addition to the deep interest Prince Bonaparte took in all matters concerning aeronautics, he was a scientist of note.

The Lakehurst Naval Air Demonstration

Naval Aircraft Perform Before Attendance of 150,000

The Air Demonstration held May 31 at the naval air station at Lakehurst, N. J., furnished the 150,000 persons who attended it numerous thrills. The attendance far surpassed the expectations of the Navy air officials.

Flying through the Airship Hangar

The biggest thrill of the day was supplied by Lieut. A. J. Williams, U.S.N., world's maximum speed record holder with 266 mi./hr., when he flew his Vought biplane through the big airship hangar, the doors at both ends being open. Lieutenant Williams, after circling around for a while, dove down straight for the hangar and shot through it at 100 mi./hr. about 50 ft. over the ground. The hangar is 350 ft. wide and 250 ft. high.

The other big stunt of the day was an attack on a dummy village by bombing planes, artillery and Marines. The village was finally destroyed when the planes dropped bombs on it—at least so it seemed to the spectators, for in fact the grand explosion was effected by electrically connected demolition charges. Other events were the evolutions of a stunt formation of three VE7 planes, piloted by Lieutenants Williams, Rittenhouse and Allen; a dog fiight between two planes; and parachute descents.

The great crowd showed tremendous interest in the Shenandoah, which was moored to her mast. The ship now has only five engines, as the sixth, which was originally mounted in the rear of the control car, has been removed to leave room for the installation of a more powerful radio set.

Shenandoah Takes Up Passengers

Ten thousand miniatures of the Shenandoah were sold on the field, and it was from these that the lucky numbers, entitling their holder to a ride in the airship, were drawn. Of the thirteen who drew lucky numbers only two showed up to claim their ride—Charles E. Garrod of Port Richmond, S. I.,, and Oscar Spitz, reporter for the Newark *Star-Eagle*—and they were not disappointed, for the Shenandoah took off late in the afternoon and gave them a three hour ride over New Jersey.

There was only one acident during the day, and that happened when the engine of a DH4B piloted by Lieut. Robert A. Kinloch, A.S., from Mitchel Field, began missing just after the ship had taken off and was about 300 ft. over the ground. To save the onlookers who crowded every available space, Lieutenant Kinloch had to side slip his ship into a small space, which washed out the landing gear and somewhat damaged the port wing. The occupants of the ship were not injured.

From the lay viewpoint the demonstration of the various types of aircraft and their activities was undoubtedly an eye opener. Practically every form of aerial operation was represented with the exception of seaplane activities and, of course, these were prohibited because of the location of the station. There were represented the airship, rigid and non-rigid, kite balloon and free balloon from lighter-than-air craft, the fighting plane, light bomber, smoke screen from heavier-than-air craft, but the big story of the day was the crowd, and the proof that it offered of the tremendous interest and enthusiasm for aviation which really exists in this country, if at times it appears to be dormant. Newspapermen began at 11 o'clock to estimate the attendance, starting at 70,000, and these estimates increased as the day went on until at the close of the show a conservative estimate of 150,000 people on the Station was made. Other press representatives were inclined to go even higher than this. Judging offhand, there were 20,000 automobiles parked on the station and from actual observation they represented fourteen States on their license tags.

Public Shows Great Interest

When the Shenandoah went aloft at 4 o'clock, observers said that on the roads from all directions leading to the Air Station, lines of automobiles two and three abreast extended as far as the eye could see. A naval officer left Philadelphia in the morning and was unable to get closer than six miles from the Station by the close of the day.

In justice to Commander Klein, commandant of the station, it must be said that in spite of this crowd they were well handled and safely regulated throughout the day without undue inconvenience to anyone.

The Air Demonstration was run by an Operations Officer from the top of the hangar, who maintained constant communication with all parts of the station by telephone and directed from this central and commanding location all of the activities. This centralization of control and perfect coordination were responsible for the fact that the schedule was run off on time and without any accidents. The Operations Officer was Lieut. H. V. Wiley.

There were thirty-five visiting planes, Army and civilian.

Two of the events on the schedule were not held on account of the high winds of about 30 mi./hr. These were the picking up of a man from the ground by the J1 non-rigid airship, and the 5,000 cu. ft. hopping balloon, which obviously are impracticable with any considerable wind blowing.

Shenandoah Makes 1000-mi. Flight

The U. S. Naval airship Shenandoah successfully completed on June 4 a 24 hr. practice cruise from Lakehurst, N. J., in the course of which she covered a total distance of about 1000 mi. This was the longest flight undertaken by the Shenandoah since her flight, last fall, to St. Louis, Mo., and back. Comdr. Zachary Lansdowne, U.S.N., who commanded the ship on this trip, said the Shenandoah had behaved remarkably well throughout. He declared that air conditions on the trip were excellent until the ship had passed over Albany and was headed toward Buffalo and Niagara Falls when she encountered gusty winds. The Shenandoah flew over Niagara Falls at an elevation of 1,200 ft. and mists rising from the Falls wet the under side of the aircraft.

Near Oswego three separate thunder showers were encountered and there was considerable lightning in the skies, but the Shenandoah rode out the showers without difficulty.

After passing over Trenton on the way back the airship struck a fog bank and it was impossible to ascertain her position. Commander Lansdowne then headed out to sea and after passing about four miles beyond the coast line emerged from the fog. Soon after the fog lifted sufficiently to permit of bringing the Shenandoah over the Naval Air Station at Lakehurst. Then another difficulty arose. Due to the heavy consumption of gasoline on the trip, it was found the ship was too light to land. The fog still persisted over the field, adding materially to the difficulty of getting her in her hangar.

Three attempts were made to come down, but each time the drag ropes hanging from the nose of the aircraft proved to be beyond the reach of the ground crew. Commander Lansdowne had sought to make a landing without valving out any of the gas, since the loss of even a small quantity of helium is an expensive matter. Finally, in the fourth attempt, after 20,000 cu. ft. of gas had been liberated, the landing was made at 8:03 a. m. There was still sufficient fuel for 21 hr. of flying in the Shenandoah's tanks when she was made fast in her hangar.

If the heavy fog had not been encountered near Trenton, Commander Lansdowne said, the airship would have landed before daylight. There were enough men for two operating crews on board and one crew relieved the other, enabling all to get some sleep. Lieut. Comdr. J. P. Norfleet, executive officer, relieved Commander Lansdowne as "skipper."

LIGHT PLANES AND GLIDERS

Edited by Edmund T. Allen

"A4", A Very Light Plane

In response to the inquiries that have reached AVIATION regarding design problems in light plane construction, it has been thought best to take up in detail some given design, hoping that the steps would be general enough to answer many questions. The terminology will be kept general, and there will be an avoidance of technical discussions.

The design selected is one which was drawn up with the purpose in mind of a very *efficient* and at the same time a practicable machine of very small size. This machine is in process of construction at Washington, D. C., and at the time of writing is 90 per cent completed. We purpose to follow through its flight tests and development in AVIATION.

The first consideration in design is the conception of what kind of an airplane one wants. Probably the most desirable type is the "general purpose" light plane, with not too high landing speed, plenty of wing area—and sufficient aspect ratio—to give a good climb with the small power plant available, and of such compact dimensions so that on the ground and in the air it will be very easy to handle. The question of economy must be considered on its merits. It is doubtful if many machines will be built with the idea of giving the lowest possible fuel consumption. This item of expense is so very small anyway, and it is such a small percentage of maintenance cost (which, of course, must include depreciation, interest, *and insurance*) that the average pilot would hardly care whether the machine made 40 or 100 mi. per gallon of gasoline. The matter has this importance, however—and this cannot be neglected in a competitive test—fuel economy is a very good measure by which to judge aerodynamic excellence in design.

Contrary, then, to what would be considered the best practical design, the A4 was conceived on the basis of (1) fuel economy, (2) ease of handling in the air and on landing, (3) climb, (4) speed, (5) simplicity of construction with limited shop facilities.

The first matter to be decided was the choice of motor. At the time there was nothing available outside the motorcycle field. It was deemed impractical to send to England for one of the successful motorcycle engines equipped with propeller shaft because of expense and delay. Of the American engines considered, the four cylinder types, Henderson, Ace, and Militor, seemed too heavy for an "efficiency" light plane, weighing as they did well over 100 lb. The Indian and Harley-Davidson engines were examined and eventually the horizontal opposed "sport model" Harley was selected. Although this engine has but 37 cu. in. displacement and is rated at a maximum of 7½ hp. at 3200 r.p.m., its beautiful balance, and its relatively low weight and low fuel economy decided in its favor. An engine was disassembled after over 100 hr. of running in a motorcycle, and was found to be in excellent condition. Fitted as it is with roller bearings, no sign of wear was noticeable on crankshaft or connecting rods.

Many changes were necessary in the engine. First, the gear case part of the crankcase was removed with a hacksaw, thus eliminating some 18 lb. useless weight. The side of the crankcase was closed by welding a thick piece of sheet aluminum over the opening. Second, a propeller shaft had to be provided. And here the old problem of geared vs. direct drive was met. Since there is already an idled gear running with a ratio of 26 to 58 with the crankshaft, it seemed a simple matter to use this drive. This made necessary a new stud in place of the short one, a new sleeve extending out to carry the propeller hub, a hole and a packing nut in the oil pump for the propeller shaft to project through, and a propeller hub itself. A set of ball bearings was provided to take the thrust and lateral bearing pressure. On the whole it was not so simple as it had at first appeared.

It is doubtful if this would be done again as the machine work was too elaborate for a single job. By the reduction in propeller speed, however, the *V/ND* is increased considerably, and one believes an efficiency of 80 per cent can easily be obtained. This will be most noticed on the climb where the difference between the 65 per cent efficiency of an ungeared propeller and 78 per cent on the geared propeller will make a difference of more than one horsepower at the propeller. In the climb this amounts to 33 per cent of the power available to climb—quite an item when one is trying to clear trees on a takeoff.

This engine was run within the past week most successfully, the gears turning over a heavy club at 1650 r.p.m. or 3680 r.p.m. engine speed. Preliminary calculations give a power absorbtion of 11.2 hp.

Finally, the intake and exhaust manifold, a heavy iron casting weighing some 12 lb., was replaced by a steel tube manifold. The carburetor was moved from its position above the engine to a place below the crankcase, where it is bolted to the manifold and the rear of the gearcase. It is particularly desirable to have gravity feed for the gasoline system, and this change accomplished the result.

(To be continued)

Possibilities of the Light Seaplane

In connection with the Short light flying boat which was described in our issue of June 2, it seems well to call attention to the wonderful practical possibilities such a type of aircraft offers.

The light seaplane is indeed a wonderland of possibilities. Almost all over the country, and especially in the East and

P. & A. Photo

Boat glider of the East Prussian Glider Society, which participated in the Rossiten glider meet

the Great Lakes area, a seaplane would be as useful as a land machine, and often more so. Forced landings are the bane of any new type of airplane. Rivers, lakes and even canals often form a continuous airdrome for cross country flights. It was remarked in a recent issue that light seaplanes were in operation in Canada in forest patrol work. The two-seater light seaplane has infinite possibilities for pleasure and useful service. In an editorial in *Flight* of April 17, occurs the following statement: "When that day comes, (the day of the light two-seater seaplane) it will mean a great deal in the history of British aviation. Not only are natural airdromes in the form of sheltered harbors, lakes and bays to be found on all our coasts, on which small waterplanes can alight, but in the Dominions conditions are, generally

speaking, even more favorable for this type of craft. Not only so, but, as a rule, existing communications are by no means as well developed as they are at home, and the waterplane cruising at even 50 mi./hr. will by comparison appear quite a hustler. One can easily imagine the light waterplane in quite a number of rôles—the carriage of small quantities of mail to scattered and outlying districts; as auxiliary feeders to main air routes; as private runabouts for well-to-do people who wish to see their district from a new point of view; as conveyances for doctors, business men and others whose time is valuable. The possibilities are almost endless, and it is well worth while examining closely the technical problems of the low powered waterplane."

Shall we next see the light amphibian ?

Martyrs of Science

C. L. Meisinger and Lieut. J. T. Neely

Dr. C. Leroy Meisinger, an expert of the U. S. Weather Bureau and Lieut. James T. Neely, A.S. of Scott Field, Belleville, Ill., were killed on June 2 when their balloon, in which they were making weather observations, was struck by lightning and burned near Bement, Ill., southwest of Champaign. It is believed they were at an elevation of about 1,000 ft., as the flight had been planned to obtain a chart of air conditions at that height.

The flight was the ninth of a series undertaken by Dr. Meisinger since his arrival at Scott Field March 30. He went there from Washington with the intention of obtaining data on cyclonic disturbances and he deliberately planned to ride out severe storms to learn conditions in the upper air. He sought to travel at an altitude of 20,000 ft. On several recent flights he had ridden out severe storms without mishap and with Lieutenant Neely as pilot had been driven great distances.

They left Scott Field, which is about 150 mi. from the scene of the accident, at 4 p. m. and the end came probably at 11:15 p. m. the time Lieutenant Neely's watch was found to have stopped.

Dr. Meisinger's body was found in the basket the next morning, a half mile from the body of Lieutenant Neely. Halfway between them was the wrecked parachute and further away was the silk bag of the balloon in which a hole had been burned.

Lieutenant Neely was about thirty years old and unmarried. His home was in Philadelphia. He was a balloon pilot during the war with the United States Army, and previous to that was said to have had experience with the British.

Dr. Meisinger was born April 30, 1895, at Plattsmouth, Nebr. He was educated in the public and high schools of Lincoln, Nebr., the University of Nebraska and George Washington University. During the war he joined the Army as an instructor of meteorology, being mainly in charge of inspection of the Signal Corps meteorological stations; he was meteorologist in charge at the Army Balloon School, Ft. Omaha, Nebr., from January to July, 1919, when he obtained his discharge from the Army and joined the U. S. Weather Bureau in the capacity of meteorologist and assistant editor of the *Monthly Weather Review*. His home was in Washington, D. C., where he married on June 15, 1921, Miss Helen B. Hilton.

Dr. Meisinger was a certified balloon pilot.

Glenn Martin Gets Navy Contract

A contract to build thirty-five type CS planes at a cost of nearly $1,000,000 has been let by the Naval Bureau of Aeronautics to the Glenn L. Martin Co. of Cleveland.

The CS or "three-in-one" type of plane is a convertible tractor biplane equipped with the 550 hp. Wright T2 engine and is designed for bombing, torpedo dropping and long range scouting. Before this type was developed, the three afore-mentioned functions were carried out by three different types of planes in the Naval Air Service.

The weight of the CS is approximately 4000 lb. The wing span is 56 ft., the height is 11 ft. and the length 34 ft. The ship has a cruising radius of about 2,200 mi., and a landing speed of about 55 mi./hr. with a maximum speed, when flown as a land plane, of 105 mi./hr.

The CS type plane is the lightest ship for its horsepower that has ever been built. The new planes will be constructed of steel and duralumin, except for the wings, which are of fabric and wood, so designed that they can be folded back, thus affording a marked saving in space. They are designed to be launched into the air from catapults mounted on the deck of battleships. They may also be operated from the flying deck of an aircraft carrier. They will have both radio sending and receiving apparatus, an earth inductor compass, two machine guns, camera equipment and lights for night flying.

American World Flight

Lieutenants Smith, Wade and Nelson, who had arrived at Kushimoto, Japan, on June 1, took off the next day for Kagoshima, a distance of 350 mi. On the way the flagplane Chicago had a forced landing due to motor trouble, but this was promptly fixed and Lieutenant Smith joined his team mates with little delay. Wade and Nelson made the hop in 6 hr. 12 min.

June 3 was spent in tuning up the planes and in installing a new engine in the Chicago. The next day the Boston (Wade) and the New Orleans (Nelson) negotiated the 500 mi. hop over the Eastern Sea to Shanghai, China, in 7 hr. 35 min. American destroyers had been placed at intervals of 60 mi. to offer assistance in case of need, but their help was not required. The weather seems to have been good. Lieutenant Smith was prevented from starting by pontoon trouble, but he made the flight successfully the next day in 6 hr. 20 min.

June 6 the fliers rested. On the 7th they pushed on to Amoy, covering the 500 mi. in 9 hr. 45 min., and on the 8th they reached Hongkong, 300 mi. away, in 3 hr. 15 min. flying time. At the time of writing the American expedition has thus covered 1650 mi. in a week's time, the best mileage made so far.

Acting upon the personal request of Maj. Frederick L. Martin, commander of the American World Flight, Maj. Mason M. Patrick, Chief of Air Service, on June 3 designated Lieutenant Smith, acting commander of the flight, to be permanently in command of it. A plan to have Major Martin resume command during the latter phases of the flight was abandoned after he had conferred with the Chief of Air Service.

Lieut. Clayton L. Bissel, A.S., is still in Alaska, endeavoring to locate the wreck of Major Martin's plane, the Seattle.

Doisy Reaches Japan

Capt. Pelletier Doisy and Sergeant Besin (such is apparently the correct spelling of their names) reached the Japanese mainland on June 8, landing at Senoshima, near Hiroshima, after having crossed the Corean Strait. The two airmen flew on June 2 from Pekin, China, to Mukden, Manchuria; on the following day from Mukden to Pingyang, Northern Corea; on the 4th from Pingyang to Taiku, Southern Corea. From the latter place they made several attempts to cross the Corean Strait, but were prevented by fog and storms, until they accomplished it on the 8th.

Lisbon to Macao Flight

Captain Paes and Lieutenant Beiros, the Portuguese airmen attempting a flight from Lisbon to Macao, near Canton, China, are nearing the goal of their venture. On June 1 they flew from Allahabad, India, to Calcutta, making the trip with a strong following wind at a speed of 120 mi./hr. On June 4 they reached Akyab, Burma, catching up with Major Maclaren who started two weeks before them and who is awaiting there the arrival of a spare amphibian to continue his world flight.

On June 6 the Portuguese airmen flew from Akyab to Rangoon, Burma, in 4½ hr.

AIRPORTS AND AIRWAYS

Hartford (Conn.) News

By Christopher M. Callup

The arrival of four government planes last week in charge of Major Richards, A.S., marked a definite beginning of an active flying season at Brainard Field (Hartford Municipal Airport). Unless all signs fail, there will be more local flying this season than has heretofore taken place since Brainard Field was established.

The attitude of official Hartford toward flying can best be illustrated by statement of the fact that the Municipal Budget for 1924 carries an $18,000 appropriation for aviation. Forty per cent of that sum will be expended in enlarging the Municipal Hangar to the standard size of 60 x 120 ft. The remainder will go for special equipment and service.

The Municipal Commission in charge of Brainard Field consists of Hiram P. Maxim, J. B. Slimmon, Charles J. McLaughlin, George Wardinski, and Clarence W. Knox. This year for the first time, the flying field will be mowed at least once a week. The Commission has already purchased a big five section lawn mower for this purpose, and a Fordson Tractor to operate it. The tractor will also be used to systematically drag and maintain the highway approach to the Field.

Superintendent George White is personally in charge of Brainard Field and beginning June 1, will have at least one man in attendance for twenty-four hours of every day. Week ends and holidays the attendants will number at least two. The Commission carries in stock 1,000 gal. of high class gas and some 250 gal. of lubricating oil representing all kinds likely to be in demand.

* * *

Civilian fliers who have thus far reserved accommodations at Brainard Field are Ralph Barrows of Glastonbury (Standard J1); T. H. Spencer of Hartford (Oriole); Neils Nelson, Hartford (LWF); John Hludik, Hartford (JN4D); E. D. Bradley, New Britain (Aeromarine) and T. D. Turley, Hartford (Aeromarine); Simon Davies, Hartford (LWF); C. A. Dixon, Hartford (Standard J1) and C. E. Manning, Hartford (JN4D).

In all probability, military aviation from Brainard Field will considerably exceed civilian flying for some time. Maj. Talbot O. Freeman, commanding the 43rd Division of the Air Service, has organized a flying squadron consisting of 17 commissioned officers and 76 enlisted men. They will have at their disposal eight JN training planes and one DeHaviland ship for the particular use of the regular Air Service Officer to be stationed here as flying instructor. As stated above, some of the squadron ships have already arrived and the remainder are expected shortly.

Two standard hangars each 60 x 120 ft. were provided this winter for use by the squadron. Both are steel frame structures, with concrete foundations, and corrugated iron covering. Said hangars were erected on land deeded by the City of Hartford to the State of Connecticut; were erected by the State; and are therefore under military control.

The City of Hartford through its Municipal Aviation Commission maintains a standing invitation to all visiting aviators, and to the limit of space available, hangar accommodation will be provided free, and the only charge to such visitors will be for supplies furnished.

Dayton News

By Maurice C. Hutton

A practical demonstration of the commercial possibilities of the new Stout all-metal Air Pullman was given Dayton environs last week when the ship was flown from Detroit to McCook field carrying seven passengers and a pilot, in 2 hr. 19 min. Throughout the journey the passengers enjoyed all the comforts of a modern railroad Pullman, whiling away the hours at cards, reading and chatting. All were dressed as if they had just stepped from their respective offices, and William B. Stout, the designer and builder, wore a straw hat.

The flight started in the morning in a smiling sun. Conditions were favorable for about 170 mi. when a rainstorm was encountered. Most of the time the aerial express was above the rain clouds and the passengers could enjoy the spectacle of seeing it rain without being in it. From the moment the big plane landed until it took off on the return journey about four hours later, it was the center of interest among pilots and engineers at McCook field. They inspected it from the muffled Liberty engine to the tip of the tail, then stood around to pepper the inventor with questions. Officials declared that no other ship that has landed at the field excited so much favorable comment.

During the visit Maj. L. W. McIntosh, chief of the Engineering Division, and Lieut. Harold R. Harris, chief of the flying section, made a trial flight. Later, Lieut. Alex Pearson, Pulitzer race entrant this fall, took the monoplane up for a spin. Before leaving, two flights were made for the benefit of interested spectators with Eddie Hamilton at the controls. The writer sat with the pilot and although the side of the cockpit was open, was able to wear a felt hat and ordinary suit without danger of losing either.

Those who made the trip in addition to Mr. Stout and the pilot were: Stanley Knauss, secretary of the Stout Metal Airplane company; H. V. Wilcox, aviation editor of the *Detroit News;* C. E. Planck, of the *Detroit Free Press;* Roy Pelletier, Orie Fryman and George Pruden.

* * *

The 88th Observation Squadron, Wilbur Wright field, has established an advance base at Bowman Field, Louisville, Ky., for joint maneuvers with the Tenth Infantry and Third Artillery during the coming weeks. Maj. H. J. Kneer, commanding officer, and Capts. Henry Pascale and J. A. Colgan are in charge of the Air Service activities.

* * *

As the first step in plans for establishing a chain of landing fields in the United States, E. A. and James M. Johnson, heads of the Johnson Airplane and Supply Co., have formed a new concern known as Johnson's Flying Service which will be the operating organization.

The partners will meet this week to elect officers of the newer company and complete the incorporation. Johnson's Flying Service has been capitalized at $5,000 under the Ohio State Laws.

In addition to the Dayton and Buffalo, N. Y., stations, the firm intends to have a winter flying field by 1925, officials asserted.

* * *

Maj. J. F. Curry who is succeeding Maj. L. W. McIntosh as chief of the Engineering Division, commanding officer of the station, and commandant of the school has been on duty at Dayton since 1919. Although a military man of the old school, he is extremely popular among the officials and civilian personnel of his new command.

Lawrence (Kan.) News

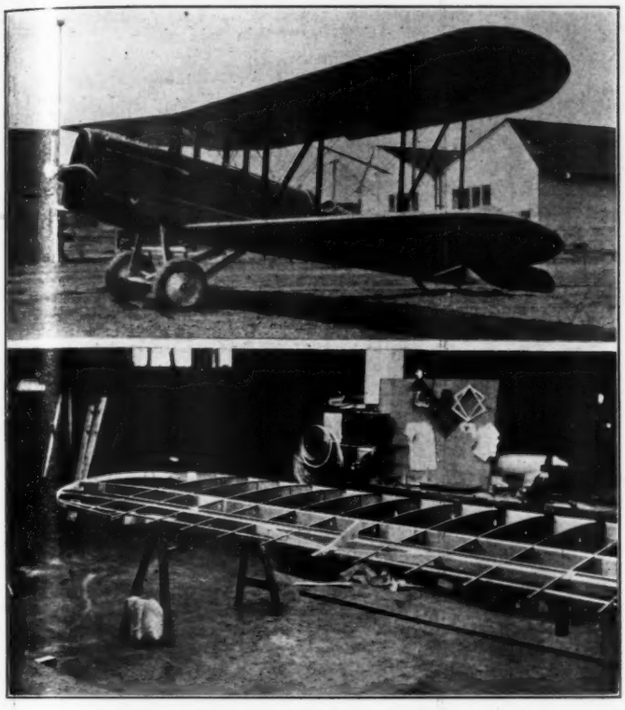
The Aviation Engineering Co. of Lawrence, Kan. is busily engaged in training students as well as in other commercial flying activities. The following students have taken flying instruction with the company this spring, some having completed their course: Art Teeters, Frank Remley, L. C. Losey, Harry Davenport, E. D. Gunn, Wesley Fletcher, R. C. Ross and Floyd Preston.

In addition to its field, which is one mile West of the University of Kansas, the company maintains a factory at 7th and Lincoln Sts.

Extension of the Night Mail Airway

When the transcontinental continuous air mail service begins operation on July 1, next, the 1000 mi. lighted airway laid out last summer for night flying will have grown to nearly 1600 mi., stretching out in the East from Chicago to Cleveland and in the West from Cheyenne to Rock Springs, Wyo. Equipment for lighting beacons to cover these two stretches totaling 570 mi. has been ordered, and part of it already is on the ground waiting for erection. Before the first through ships leave New York and San Francisco, installation is expected to be completed.

Necessity for the extension of the lighting system is to guard against the possibility of delayed planes being caught



The Loening-winged DH of the Air Mail Service. The interesting wing structure, with duralumin ribs on spruce spars, is shown in the lower picture

by descending darkness before reaching the lighted airway which at present begins at Chicago on the East and Cheyenne on the West. Under the summer schedule, recently announced, planes will leave New York at 10:00 a. m., and San Francisco at 6:00 a. m. each day. The hours of departure are fixed at both ends to meet minimum conditions of fog. Under average weather conditions planes will leave New York after the fog has cleared and San Francisco before it has settled.

It is anticipated however, that, flying day in and day out throughout the year, planes will sometimes be delayed in their departure at New York through the failure of the fog blanket to lift and at San Francisco because of its settling earlier in the morning. Then, too, is the possibility of delays caused by mechanical failures. Such delays, even if only of two or three hours, would necessitate the Air Mail pilots flying in total darkness for some distance before reaching the comparative safety of the lighted airway as it is at present. In extreme instances it would cause the abandonment of a trip in the interest of safety.

These dangers, it is believed, will be avoided, through the extension of the lighting system so that when an Air Mail flier is caught by the darkness before reaching Chicago or Cheyenne the lights may be turned on, furnishing him a brilliant and unmistakable pathway to his destination.

Instead of the big beacons of 500,000,000 candlepower placed at the five terminal landing fields between Chicago and Cheyenne, the new lights for the terminals within the extended zones will be only five million candlepower. There will be one of these at Cleveland and another at Bryan, Ohio, on the eastern extension, and one each at Rawlins and Rock Springs, Wyo., on the western extension. Emergency landing fields at twenty-five mile intervals, however, will be equipped with the same type of illumination now used on similar fields on the existing lighted airway. These smaller beacons are revolving and have a visibility on clear nights of about thirty miles. They will be located at the following points westward from Cleveland: Ridgeville, Huron, Vickery, Woodville, Waterville, Gerald (Ohio) and Ashley, Walcottville, Goshen, Lakeville, La Porte, McCool, Harvey (Illinois). Eastward from Rock Springs to Cheyenne the lighted emergency landing fields will be located at Salt Wells, Wamsutter, Walcott, Rock River, Laramie, Bitter Creek, Cherokee, Medicine Bow, Bosler and Federal (Wyoming).

New World Records

Official notice has been received by the Contest Committee, N.A.A., from the International Aeronautic Federation that new world records have been homologated as follows:

CLASS C: AIRPLANES

Altitude with 250 kg. useful load

(United States) Lt. H. R. Harris, U.S.A.S., TP1, Liberty 400 hp. at McCook Field, Dayton, Ohio, March 27, 1924. 8,980 m. 29,462 ft.

Duration with 250 kg. useful load

(United States) Lt. H. R. Harris, U.S.A.S., TP1 plane, Liberty 400 hp. at McCook Field, Dayton, Ohio, March 27, 1924. 1 hr. 48 min. 19.4 sec.

CLASS C1: SEAPLANES

Altitude with 1500 kg. useful load

(France) Naval Lt. Pelletier Doisy, Blanchard seaplane, 2 Hispano-Suiza 300 hp. at St. Raphael, April 17, 1924. 2,130 m. 6,988 ft.

CLASS G: HELICOPTERS

Distance (air line) without landing

(France) Oemichen, Oemichen helicopter, 4 propellers, Le Rhône 180 hp. at Valentigny, April 14, 1924. 360 m. 1,181 ft.

(France) Oemichen, Oemichen helicopter, 4 propellers, Le Rhône 180 hp. at Valentigny, April 17, 1924. 525 m. 1,722 ft.

(France) Pescara, Pescara helicopter, 2 propellers, Hispano-Suiza 180 hp. at Issy-les-Moulineaux, April 18, 1924. 736 m. 2,424 ft.

Another Seaplane for the Arctic

A British Arctic expedition, under the auspices of Oxford University and supported by the War and Air Offices, will sail soon from Newcastle under the leadership of George Binney who headed last year's Oxford expedition.

Two ships have been chartered, and a seaplane specially designed for Arctic reconnaissance work has also been constructed.

The primary objective is to explore North Eastland Island, 90 miles square, which lies northeast of the main Spitzbergen Island.

The present attempt is to be made to coordinate the work of three sledging survey parties and the seaplane, the seaplane to conduct an aerial survey and the sledging parties to fix points for the aerial map.

French Air Transport Competition

One million francs in prizes is being given by the French air ministry for a competition for multi-motored transport airplanes to be held from Aug. 17 to 24, next. The competition will consist of two events.

In the first, the qualification test, the competitors will have to make a number of figure eights with each of their motors stopped in turn. In the second, the competition proper, the contestants will have to fly from Le Bourget, the airport of Paris, to Bordeaux and back, a total distance of 1900 mi.

Start of Gordon Bennett Balloons

The Contest Committee of the Aero Club of Belgium has announced the order of start of the contestants in the Gordon Bennett Balloon Race to be held from Brussels, June 22. The contestants will start grouped in national teams, as follows:

1. Belgium, 2. France, 3. Switzerland, 4. United States, 5. Italy, 6. Great Britain, 7. Spain.

From Ogdensburg to San Antonio

George B. Post, the indefatigable flying business manager of the Huff Daland Co., has added another couple of thousand miles to his aerial activities by flying a Petrel 5 from Ogdensburg to Brooks Field, San Antonio, Tex. Writing from the latter field under date of May 30, Mr. Post describes his trip as follows:

"I had a very successful trip coming down in the Petrel Model Five. Left Ogdensburg on May 20 and landed here on the 27th, having spent two days playing around McCook Field having the motor checked over and selecting the proper propeller for the competition down here. Killed off two more days on account of bad weather, one at Indianapolis and the other at Muskogee, so that it actually figured four days flying, and one of those was a short one at that. Total time in the air was 26 hr. and the mileage approximately 1900 mi., flying by way of Buffalo, Cleveland, Dayton, St. Louis, Kansas City, Muskogee, Okla., and Dallas, Tex. As was to be expected when going into the southwest I encountered head winds most of the way.

"The ship had only been flown for 40 min. previous to the take-off so that I believe it really was quite a remarkable demonstration from the standpoint of a service test.

"The ship was the regular Petrel Model 5 with the exception of the seating arrangement which was fixed up of course as a two-seater for Army training. Also I had a special tank installation of 85 gal. which allowed a cruising radius of almost 600 mi. in still air, although I hardly used more than half of it in making the regular airways hops.

"Carried Bob Kimes as a passenger going West from Dayton, but was alone the rest of the time. By the way, with him aboard and our luggage and full tanks of gas the ship was carrying a useful load of more than 900 lb. and cruising along between 85 and 90 mi./hr."

New British Airship Plans

The British Government has decided, after careful examination, to reject the Burney airship scheme, which contemplated biweekly service to India by six large airships.

Prime Minister MacDonald, in making this announcement in the House of Commons, said the Government had agreed to authorize the Air Ministry to initiate a comprehensive program of research and experiments at the airship station at Cardington, including experiments with the existing airships and the construction of a new one with a capacity of 5,000,000 cu. ft. The Air Ministry, he stated, would construct a terminal and an intermediate base overseas, with facilities to enable these two airships to be operated with safety between England and India.

Mr. MacDonald said the Air Ministry would give the airship company the first offer of a contract for the construction of a second ship for commercial purposes, with a clause under which the constructors would be able to repurchase the ship from the Air Minister at a reduced figure, to be operated with the approval of the British commercial airship service and to be available for State purposes if necessary.

The Prime Minister said a supplementary estimate of £1,200,000 for this service in the current year would be laid before the House. Although more than £4,000,000 would be required over a period of fifteen years, he added, it was estimated that, allowing for the repurchase of the second ship by its constructors, the net expenditure in three years, would not exceed £1,200,000.

An Eventful Balloon Trip

A French balloon, one of eleven which started from Saint Cloud, near Paris, on May 17, in the annual race for the Aumont-Thieville Cup, landed at Broughton, Hampshire, the next day with only the pilot on board, his aide M. Boitard, having jumped into the sea when the balloon was caught in a channel storm.

During the night the balloonists lost their bearings, and the following morning while over Solent found the gas was escaping from the bag. They threw out all the ballast, but the balloon continued to sink and was in danger of falling into the sea when Boitard adopted the heroic expedient of jumping overboard.

A man on the cliffs, who saw him swimming toward shore, got a boat and went to his assistance, but the boat leaked and when he reached Boitard he was unable to take him into the craft, but had to hold him up in the water until Coast Guards put out in a boat and effected a rescue.

Boitard was suffering from exhaustion from his half-mile swim and was taken to a hospital.

Meanwhile, the balloon, relieved of Boitard's weight, rose again and the pilot was able to effect a safe landing at Broughton.

St. Joseph (Mo.) News

The activities shown by Rosecrans Municipal Air Field, St. Joseph, Mo., for the official year, May 12, 1923, to May 12, 1924, were 365 planes in and out. Two commercial companies have been operating from this field since Oct. 1, 1923: the Standard Aircraft Corp. which is carrying on a school for training of air pilots, with fifteen students enrolled at the present, is doing general commercial work; and the E. B. Tracy Airplane Co. which is doing general commercial work. These two companies are operating five planes.

Practically every day there are planes visiting Rosecrans Field from various sections in the United States. It is estimated that for the official year 4000 people have been carried as passengers from the field. The commercial companies are carrying each week from 200 to 300 passengers. They have lowered their rates to the nominal sum of $3.00 per passenger.

Buenos Aires-Montevideo Service Suspended

Owing to the action of the Argentine government in withdrawing the postal subsidy to the Compañia Rio Platense de Aviacion, the daily air service between Buenos Aires and Montevideo has been indefinitely suspended. The subsidy amounted to 8,000 Argentine pesos a month ($2,640, at current exchange of $0.33 per peso), and the service was formally opened on Jan. 2. During the short life of the company, 177 trips were made between Buenos Aires and Montevideo, 368 bags of mail were carried, and 574 paid passengers were transported.

While the aviation company was in operation it was possible for a letter to be posted in Buenos Aires at 11 a. m., be delivered in Montevideo at 3 o'clock that afternoon, and a reply returned that same afternoon, if necessary. By the present mail service, from 36 to 48 hr. is required for an answer to be received to a letter sent from one city to the other.

Famous Collection for Sale

F. S. Lahm of Paris, France, reports that there is available and for sale in Paris by Louis Godard, son of the original aeronaut Godard, a valuable collection of about 1500 historical aeronautical photographs. They date from 1870 to 1910. In addition to the fifteen hundred photographs there are about five hundred aeronautical lithographs. The price asked for the collection is reasonable considering its quite unique nature.

Anyone interested may communicate through the National Aeronautic Association, 1623 H Street, N. W., Washington, D. C.

Woman Does 212 Loops

Mme. Adrienne Bolland, the French woman pilot who crossed the Andes between Argentina and Chile in a Caudron G3 training plane, made 212 loops on May 27 near Paris, France. She started at 4:12 p. m. and landed at 5:25 p. m. having broken her own record for women of 98 loops, established on Oct. 18, 1922.

Fronval, the French aviator, holds the world's record with 962 loops.

Aircraft Concern Bankrupt

A voluntary petition in bankruptcy has been filed in the United States District Court of New York by the Interallied Aircraft Corp. of 185 Madison Ave., listing liabilities of $184,885 and assets of $4,236.

The Chase National Bank is the largest creditor, with a claim of $103,281.

Hunting Wild Geese from Airplanes

Hunting migratory wild fowl from an airplane is a hazardous sport, not only from the point of view of law violation, but because of the actual physical risk involved. The Biological Survey of the U. S. Department of Agriculture recently received a letter from a violator apprehended in Oklahoma for shooting wild geese from an airplane. The letter said in part:

"The whole thing started in a spirit of adventure, and we had no knowledge that we were violating any game laws. We first conceived the idea to go up and spot the geese on the ground, then land and do the best we could slipping up on them. Some bystander made the remark that a goose flew faster than a plane and that it was impossible to get near enough to kill one from a plane. In a dare-devil spirit we decided to demonstrate, and since it is so hazardous I never would have guessed that it was against the law. In the first place, it is necessary to be out on the wing, and if strapped or tied in any way it is almost impossible to shoot accurately, then all conditions such as visibility, perfect operation of the motor, and a skillful pilot are necessary. To my mind a man takes his life in his own hands, and after the one successful shoot I had enough. I nearly fell off at one time, and was very much excited and elated when we landed, but as I remember it we got only four of five geese."

Altitude Record for 500 Kg. Load

Reaching an altitude of 27,470 ft., Lieut. Harold R. Harris, A.S., stationed at McCook Field, Dayton, broke the world's altitude record for weight carrying load of 500 kg. according to official advice received by the Chief of Air Service. Lieutenant Harris piloted a TP2 two-seater pursuit airplane, powered with a Liberty engine, and at the peak of his climb encountered a temperature of -38 deg. Cent. His record flight also established a duration record for 500 kg., his time in the air being 1 hr. 35 min.

Up to the time of Lieutenant Harris' flight, the holder of the world's altitude record for a 500 kg. load was Otto Ballod, who at Buenos Aires, Argentine, on Jan. 24 last, reached 21,276 ft. in a Fokker C4 airplane.

The recording instruments in Lieutenant Harris' plane have been sent to the Bureau of Standards for calibration, and subsequent ratification by the F.A.I.

The above record adds another one to the many now being held by Lieutenant Harris. This officer at present holds world's records for speed over 1,000, 1,500 and 2,000 km.; for duration carrying useful loads of 250, 1,000, 1,500, 2,000 and 3,000 kg.; and for altitude carrying useful loads of 250, 1,500, 2,000 and 3,000 kg. Altogether he holds thirteen world's records.

The Johnson Commercial Fleet

The accompanying illustration, showing the commercial planes of the Johnson Airplane & Supply Co. lined up for inspection on their field at Dayton, Ohio, gives a good idea of the modern equipment used by this progressive firm of aircraft operators.

In the front row there are, from left to right the Hartzell FC1 three-seater (90 hp. OX5 engine) on which Walter E. Lees won the Flying Club of St. Louis Trophy race, Oct. 4, 1923, at an average speed of 89.3 mi./hr.; two Swallow, model 1924, three-seaters (OX5 engine), which were delivered in flight from Wichita at an average speed of 83.5 mi./hr.; and an SVA model 9 two-seater (220 hp. S.P.A. engine), with a speed of 125 mi./hr.

The commercial air fleet of the Johnson Airplane & Supply Co. lined up for inspection on their flying field at Dayton, Ohio

In the rear row there are, from left to right, two Jennies with OX5 engine; the new Lincoln Standard, model LS5, five-seater semi-cabin plane (180 hp. Hispano-Suiza engine); and a Swallow, model 1923, three-seater (OX5 engine).

Seattle News

By Robert J. Minshall

The JL6 airplane which Roald Amundsen was intending to use in his trans-polar flight during 1923 is now in Seattle, and is to be used in passenger-carrying work by the Ace Aircraft Corp.

The JL6 has been remodeled entirely by the installation of a 200 hp. Hall-Scott Liberty 6, and a new gasoline system.

The Ace Aircraft Corp. is a newly formed concern for the exploitation of commercial aviation in and about Seattle. They have purchased from the Navy a number of Boeing Training Planes of the type furnished the Navy during the war. These planes are being remodeled by replacing the pontoons with landing gear. When the Company's plans are complete, they will have three Jennies, several Boeing planes, and the Junkers JL6 for commercial flying. Their hangars are located on Marginal Way, where they have a good two-way flying field.

Night Flying on London-Paris Route

Night flights from London to Paris by after-dinner express airplanes traveling 100 mi./hr. are to be attempted in the near future by the Imperial Airways, Limited, to enable business men to dine in London after a day's work and get to Paris at bedtime.

Plans also are being made for a service of big planes equipped with comfortable sleeping berths for flight during the night from London to distant European capitals.

The Imperial Airways resumed operation of their services on May 2, the disagreement with the civilian air pilots having been amicably settled after four weeks of argument.

UNITED STATES AIR FORCES

U. S. ARMY AIR SERVICE

Air Units having Foreign Decorations

The following is a complete list of the Air Service and Anti-Aircraft Service units of the United States Army to which decorations (including the fourragère) have been awarded by foreign governments, together with the citations, as shown by the records of the War Department. Members, or former members, of these organizations are authorized to wear the decorations to which these awards entitle them.

AIR SERVICE UNITS

91ST AERO SQUADRON

French croix de guerre with palm, under Order No. 14.016 "D," dated March 8, 1919, General Headquarters, French Armies of the East, with the following citation:

"The first squadron of the American Army called to execute long-distance reconnaissances, it immediately realized, with admirable comprehension, the needs of the high command.

"Thanks to the bravery and untiring devotion of its excellent personnel, it brought back the most valuable information, covered 18,000 km. of enemy territory, taking more than 2,500 photographs and engaging in 58 combats, during which four enemy planes were destroyed."

94TH AERO SQUADRON

French croix de guerre with palm, under Order No. 14.016 "D," dated March 8, 1919, General Headquarters, French Armies of the East, with the following citation:

"The first American pursuit squadron engaged at the front, it won admiration by its incomparable audacity. It was a formidable adversary, which engaged in 296 combats and scored 69 official victories (55 airplanes and 14 balloons)."

103D AERO SQUADRON (FORMERLY THE LAFAYETTE ESCADRILLE)*

French croix de guerre with two palms.—Palm awarded under Order dated Aug. 15, 1917, with the following citation:

"A squadron composed of American volunteers who came, in the purest spirit of self-sacrifice, to fight for France. Under the command of its organizer, Captain Thenault, it fought valiantly and unceasingly against our enemies. Far from being discouraged by hard combats and losses, these only heightened its morale. By destroying 28 enemy airplanes it won the high admiration of its commanders and of the French squadrons which, fighting by its side, strove to rival its valor." (then 124th Squadron, French Air Service (Lafayette)).

Additional palm awarded under Order No. 10.805 "D," dated Oct. 22, 1918, General Headquarters, French Armies of the North and Northeast, with the following citation:

"A brilliant unit, which, under the command of Major Thaw, proved itself, during the operations in Flanders, worthy of its glorious past. Not allowing the loss of one-third of its numbers to interfere, it assured, in a difficult sector, a perfect security to the planes of our army corps, a most complete service of reconnaissance at high and low altitude, and the destruction of a great number of German planes and captive balloons far behind the enemy's lines as well as over those of our own troops."

ANTI-AIRCRAFT SERVICE UNITS

HEADQUARTERS AND SUPPLY COMPANY, 1ST BATTALION ANTI-AIRCRAFT ARTILLERY

French croix de guerre with bronze star, under Order No. 13.140"D," dated Jan. 25, 1919, General Headquarters, French Armies of the East, with the following citation:

"Successfully under the command of Capt. R. E. M. Goolrick, First Lieut. Forrest W. Mitchell, and Second Lieut. Alfred L. Tower, this unit occupied for several months a position that was frequently fired upon by the enemy artillery. It courageously endured numerous heavy-caliber bombardments and never ceased to fulfill its mission."

1ST ANTI-AIRCRAFT MACHINE GUN BATTALION

French croix de guerre with gilt star, under Order No. 13.021 "D," dated Jan. 21, 1919, General Headquarters, French Armies of the East, with the following citation:

"Under the active and brilliant leadership of its commander, Major Cushing, it distinguished itself by the results which it obtained on the Marne and the Moselle, the heroism which it displayed, and by its high ideals."

*This organization was composed largely of Americans who had entered the French Air Service prior to the entry of the United States in the World War and who were transferred from the French Army to the United States Army.

Maneuvers of the 6th Composite Group

The annual Pacific Sub-sector Maneuvers, in which the major portion of the Panama Canal Division participated, has just been closed after a problem lasting from April 1 to April 10, and which involved a land defense against an enemy landing force.

The Sixth Composite Group, Air Service, played a considerable part in the solving of the problem and the testing of the results of the division training. The first two or three days were principally devoted to a test of communications. These exercises embraced telephone, radio, runner and the conveying of information from outposts to airplane through the medium of panels and transmitted from the plane to the command post by means of radio and dropped message.

It is not often that the Air Service squadrons are called upon to cooperate with Infantry in the solution of a maneuver problem, and since such training is of the utmost importance to any plan of defense of the Canal Zone, the lessons taught and the hitherto unthought of problems which arose are considered of vital importance.

The second phase of the problem resulted in an unusually successful employment of aircraft for reconnaissance. During the entire daylight period of April 9, while the outposts of the division waited patiently for the enemy thrust and landing, the Air Service located and established contact with the enemy boats in the early morning and maintained contact throughout the day, straffing the personnel and bombing the launches repeatedly.

For the purpose of simulating activity which would normally occur, an enemy bombing formation, consisting of three Martins from the 25th Bombardment Squadron and led by Capt. Harry M. Smith, bombed the Pedro Miguel and Miraflores locks and adjacent area, and with protective pursuit (DH's) straffed the defending forces until driven off by a flight of three MBA's and three SE5's.

The entire exercise was a most instructive one for the Air Service personnel engaged in the maneuver. While the problem was one primarily of infantry tactics, it is only in taking part in such a maneuver that the pilot and observer can learn the theories of ground troop movements which are so important if real assistance is to be rendered from the air.

The high commendation won from Major General Lassiter upon the remarkable and perfect liaison between land and air should be received in the spirit in which it has been given, that the defense of the Panama Canal, regardless of the plan to be followed, must embrace within it an Air force highly trained in every form of mission. This confidence, already established, must not be found ill placed when that day arrives.

Lieut. Richards Receives Degree

Lieut. W. E. Richards, A.S., who is pursuing a course of instruction at the Massachusetts Institute of Technology, Cambridge, Mass., has been recommended for the degree of Master of Science at a recent meeting of the faculty of this institution.

Major Curry to Command McCook Field

Maj. John F. Curry, A.S., has been appointed as the new commandant of McCook Field and chief of the A.S. Engineering Division, in place of Maj. L. W. McIntosh, A.S., who has been ordered to the Command and General Staff School at Fort Leavenworth, Kan. Major Curry's appointment becomes effective July 1, next.

McCook Field's new "C.O." was born April 22, 1886, in New York City, the son of J. Frank Curry and Mary MacKinnin. He graduated from West Point in 1908. He was detailed to the Aviation Section, Signal Corps in 1915, in which he obtained a Junior Military Aviator's rating in 1916. He participated in the Pershing punitive expedition against Villa, from May, 1916, to January, 1917, as a pilot of the 1st Aero Squadron; commanded the 6th Aero Squadron, Pearl Harbor, T. H., February to July, 1917; attached to the Office, Chief Signal Officer, September to November, 1917; commanding officer of Ellington Field, Tex., November 1917, to April, 1918; chief of staff, Air Service, Second Army, A.E.F., October, 1918, to April, 1919; Department Air Officer, Hawaiian Department January, 1920, to 1921; attached to Engineering Division, A.S., since February, 1923.

He holds the following flying ratings: Junior Military Aviator (1916), Military Aviator, Airplane Pilot, Expert Aviator (Ae.C.A., 1916).

Two Fliers up 31,500 Ft.

Lieuts. John A. Macready and A. W. Stevens made on May 2 at McCook Field an unofficial new two-man altitude record when they reached 31,500 ft. in a Lepere airplane.

Although oxygen helmets were used and a temperature of 52 deg. below zero was encountered, the men suffered no ill effects. Instruments showed an altitude of 36,000 ft. but calibration brought this down to the lower figure. The previous record was 30,300 ft.

The F.A.I. does not officially recognize altitude records made by planes carrying two men.

U. S. NAVAL AVIATION

Shenandoah Flies Again

The Navy airship Shenandoah made on May 22 her first flight since Jan. 16 when she broke away from her mooring mast. The flight, which commenced about 7 p. m., lasted 1 hr. 10 min., and was made with the Commanding Officer, Lieut. Comdr. Zachary Lansdowne, in command. The flight was from Lakehurst toward Tom's River and return, and was satisfactory in every respect, including the operation of a water recovery unit which was on the ship for trial and test.

The non-rigid airship J1, recently commissioned at Lakehurst, has made a number of flights recently. The first flight was made on May 16, under the command of Lieut. Clinton H. Havill, U.S.N. On May 20 another flight was made of one hour's duration, with Commander Lansdowne in command. This flight was for the purpose of making a practice landing. On the 22nd the J1 made a flight of nearly one hour. On May 26 the J1 made a 3 hr. flight from Lakehurst to Philadelphia and return.

Flying Boat Helps Submarine

The Commanding Officer of the Submarine Base at Coco Solo, Canal Zone, was afforded quick transportation to a submarine which had been grounded off the Perlas Islands, by an F5L plane of the Naval Air Station at Coco Solo on May 6.

Word was received during the afternoon of the sixth that one of the submarines which had been operating at the Perlas Islands had gone aground on an uncharted rock. The Commanding Officer of the Submarine Base at once requested transit by plane to the scene of the grounding, and an F5L from the Air Station was immediately made ready and left with the Commanding Officer of the Submarine Base and his salvage officers. Due to the use of the plane the Base Officers were enabled to take charge of salvage operations within four hours after the word was received, whereas normally they could not have arrived upon the scene until the following morning.

Naval Air Orders

Lt. Comdr. Wadley Capehart, det. Aire. Sqns. Scout. Flt.; to undergo instruction, Naval War College, Newport.

Ens. Alfred R. Taylor, det. U.S.S. Seattle; to U.S.S. Aroostook.

Ens. Humphrey W. Toomey, det. U.S.S. Seattle; to U.S.S. Aroostook.

Lieut. Charles C. Ammermann (M.C.), det. Nav. Air Sta. Anacostia, D. C.; to Nav. Hosp., Washington.

Lieut. Harry P. Krummes (M.C.), det. Nav. Med. School, Washington; to Nav. Air Sta. Anacostia, D. C.

Lieut. Louis Haase (C.C.), det. Insptr. Nav. Aire. at David Douglas Co., Santa Monica, Calif.; to M.I.T., Cambridge, Mass.

Mach. Alfred Ward, det. U.S.S. Langley; to Nav. Trg. Sta. Great Lakes, Ill., involving flying.

Lieut. (j.g) John E. Wood (S.C.), det. Nav. Aire. Factory, Philadelphia; to U.S.S. Scorpion.

Mach. Robert Farris, det. Nav. Trg. Sta. Great Lakes, Ill.; to U.S.S. Langley.

Lieut. (j.g.) Edmond T. Steward (S.C.), det. Aire. Sqns. Battle Flt.; to Nav. Air Sta. Lakehurst, N. J.

Boat. Walter J. Daly, det. Aire. Sqns. Scout Flt.; to Nav. Air Sta., Coco Solo, C. Z., involving flying.

Ch. Gun. William H. Stephenson, det. Nav. Air Sta. Pensacola, Fla.; to U.S.S. Whitney.

Comdr. Warren G. Child, order May 5, 1924, modified, det. Gen. Insptr. Nav. Aireraft, East. Dist., Garden City, L. I., July 1 instead of June 15, 1924.

Lt. Comdr. Bruce G. Leighton, det. Bu. Aero., Navy Dept.; to aide on staff, Comdr. Light Cruiser Divs., flying and command of Obs. Plane Sqn. 3.

Lieut. Frederick W. Neilson, det. Bu. Aero. Navy Dept.; to Aire. Sqns. Scouting Flt., flying.

Lieut. (j.g.) Caleb J. Coastwort, jr., det. Aire. Sqns. Battle Flt.; to Nav. Air Sta. Pearl Harbor, T. H.

Lieut. (j.g.) William Sinton, det. Torp. & Bomb. Plane Sqn. 2, Aire. Sqns. Battle Flt.; to Nav. Air Sta. Pearl Harbor, T. H., flying.

Lieut. Lester T. Hundt, det. Aire. Sqns. Scout. Flt.; to Nav. Air Sta., Anacostia, D. C., flying.

Lieut. Wallace M. Dillon, det. U.S.S. Langley; to Bu. Aero Navy Dept., flying.

Note.—Lieut. (j.g.) Charles Davant Forter died May 17, 1924, at the Nav. Air Sta. Pensacola, Fla.

CALENDAR OF AERONAUTICAL EVENTS

March 25.	Start of the British World Flight, Southampton, England.
April 6.	Start of World Flight of the U. S. Army Air Service, Seattle.
June 15.	Gordon Bennett International Balloon Race, Brussels, Belgium.
June 21.	Annual F.A.I. Conference, Paris, France.
June 22.	Commodore Beaumont International Cup Race for high speed airplanes, Istres, France.
July 5-6.	Zenith International Airplane Efficiency Race, Paris, France.
August.	"Tour de France des Avionnettes." International Round-France race for light airplanes.
Oct. 2-4.	International Air Races, incl. Pulitzer Trophy Race, Dayton, Ohio.
Oct. 24-25.	Schneider Cup Race, Baltimore.
Dec. 17.	Twenty-first anniversary of the first successful airplane flight.

Marine Plane Rescues Marooned Campers

A plane from the Marine Flying Field at Quantico, Va., delivered food to three persons marooned on an island in the flooded James River on May 14. They had been without food for three days, and repeated efforts to reach them by those on the shore had been unsuccessful, due to the strength of the current of the flooded river and the presence of a large number of boulders in the river. The condition of the river indicated that by the time the water had receded to its normal level, thus permitting the passage of a boat, the three marooned campers would be dead.

A call for assistance was made to Quantico through a Richmond newspaper, on May 14, and a plane piloted by Lieutenant Ridderleof, U.S.M.C., was at once sent to Richmond, took on board bags of food and dropped them on the island within a few feet of the campers.

The Flying Marines in Haiti

The transportation by air of medicine, supplies, animals and mail to various parts of the island of Haiti and nearby points in the Caribbean is one phase of the work that has been done by the Marine Corps aviation station at Port au Prince, Haiti.

A compilation of the activities of this station for the year 1923, recently received in the Navy Department, discloses the fact that during this period a total of 894 official trips by plane were made by the Marine organization in Haiti. This work included the transportation of American officials and representatives of the Haitian government to the different posts and cities in the Republic of Haiti, and served to speed up the conduct of business in the island republic. Two hundred sixty-nine passengers, besides aviation personnel, were transported during the year without accident, and all material placed in planes for delivery reached its destination without loss.

Lieut. Gorton Injured in Crash

Lieut. A. W. Gorton, U.S.N., was painfully injured on May 26 when his plane crashed on taking off from Hillsgrove Aviation Field, Providence, R. I. The ship was completely wrecked.

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PUBLISHER'S NEWS LETTER

In the newspapers of June 6, there appeared in a group with typical headlines the story of eleven airplane deaths that occurred on the day before. Cables from England and Japan and a telegraph dispatch from Kelly Field, Tex., brought the news of the deaths of officers and soldiers in military aircraft. The public has read of so many accidents to military and naval aircraft that they jump to the conclusion that all aircraft are unsafe, forgetting the daily achievements of our air mail and the commercial lines all over the world. This is the sort of news article that everyone interested in aviation deplores, but there is another side to it which may be interesting.

* * * *

What is news, and why do newspapers print so much so-called news that seems trivial? Perhaps a few words on the characteristics of news may make the whole matter clearer. News from the newspaper editor's view point must have four characteristics: 1. Prominence or notoriety of persons; 2. Amount of money involved; 3. Extraordinary circumstances; 4. Local interest. If the above four tests are applied to newspaper articles it will be found that, in varying proportions, all of them give the clue to why the story is printed. Aircraft stories usually involve persons who have some official connections or are known to the public; they occur in a manner that appears extraordinary to the public and the prominence given the news depends on whether it occurred nearby or at a distance. In other words airplane accidents meet the main requirements of the newspapers' nose for news.

* * * *

A newspaper man recently gave an answer to a criticism which can be applied to airplane accidents as well. He said that he was often asked why newspapers "played up" stories of the misdeeds of clergymen. He said he always replied that he hoped he would not live to see the day when these occurrences were not given great prominence. He reasoned, judged by the newspaper idea of news, that if the derelictions of clergymen ever became so frequent as not to be out of the ordinary he believed the world would not be a good place to live in. "The Wages of Sin is Publicity" is the new and true deterrent to misdoing. The only time when aviation accidents will not assume enough importance to be classed as news will be when they occur so frequently as not to be uncommon. Death on railroads or road crossings, and automobile accidents now have little general interest except when they come under some of the above news requirements. It is a hopeless task to attempt to dam the current of news and should not be attempted.

* * * *

The "Brickbat and Bouquet" column continues to seem a necessity. Amid almost unanimous expressions of approval of some of the recent editorial opinions expressed in AVIATION, there came a letter from the almost deserted headquarters of the National Aeronautic Association in Washington. Among the choice bits of invective it contained were the following:

"I can only look on AVIATION as the most serious obstacle in our work."

"I can only regard it as an enemy of the N.A.A."

"Such an editorial attitude, *if it has any influence whatever*, is calculated not to add to the membership of the N.A.A., but to drive members out of the Association."

"The critics of the N.A.A. are devoted to a policy of destruction. They build not at all."

"This letter by no means expresses my feelings, nor does it advance completely the arguments that would justly condemn the critics and growlers and disguised enemies of the Association."

"The little cities are our best friends, and we find they are the most fertile soil. The big cities think they 'know it all.' They do little and say little in our support; their attitude is rather one of antagonism and superiority, the kind of superiority which I do not recognize as being justified by the facts."

Of course, such an ill tempered attack on the oldest American aeronautical paper deserves, and is receiving, a most exhaustive reply to the Board of Governors. We shall not crowd out of our small paper more interesting news to make this reply in our columns, but if any of our readers would like to have a printed copy of the reply, it will be sent with the hope that our opinions which have been characterized as those of a "disguised enemy" will no longer be misunderstood nor further "disguised." It is a brief history of the N.A.A. to date. Copies on request.

So that AVIATION might have the benefit of the opinion of one of the officers of the N.A.A. who is not attached to the Dayton group, the opinion of the Treasurer was asked. He writes:

"I have read all the copies of AVIATION which you have sent me and I cannot find anything in any of them to which any reasonable man can take exception whether he be a member of the N.A.A. or an outsider.

"I think you are doing splendid work and hope that sometime you will be able to receive a material reward to which your long years of hard sledding entitle you."

Our readers can take their choice of opinions.—L.D.G.

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INDEX TO ADVERTISERS

A

Airplane & Motor Supply Co. 657
Atlantic Aircraft Corp. 660
American Propeller & Mfg. Co. 656

C

Classified Advertising 657
Curtiss Aeroplane Export Corp. 657

E

Ericson Aircraft, Ltd. 656

F

Fairchild Aerial Camera Corporation 656

G

Greenebaum, Dr. L. 656
Gulf Coast Airline 656

H

Hamilton Aero Mfg. Co. 656
Hardin Parachute Co., Inc. 639
Huff Daland Aero Corp. 656
Hartney, Harold Evans 656

I

Ireland, G. S. 656

J

Johnson Airplane & Supply Co. 638
Johnson Motor Products, Inc. 659

K

Kellett, Wallace, Co., Inc. 658, 660

L

Lamblin, Etablissements 658
Ludington Exhibition Co. 656

M

Martin, The Glenn L., Co. 638

N

New Jersey Veneer Co. 658

O

Ostergaard Aircraft Works 656

P

Pioneer Instrument Co. 656

R

Rand McNally & Co. 659
Robertson Aircraft Corp. 639, 659

S

Samuel, DeNeal H., Inc. 658

T

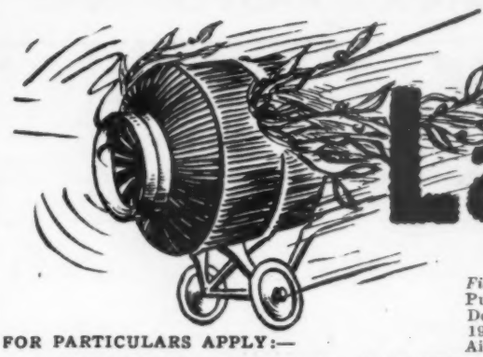
Titanine, Inc. 658

W

Warner, Edward P. 656
Where to Fly 654
Wright Aeronautical Corp. 640

Y

Yackey Aircraft Co. 656



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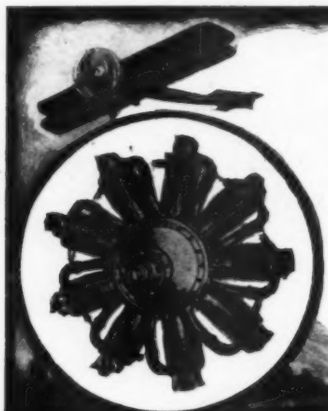

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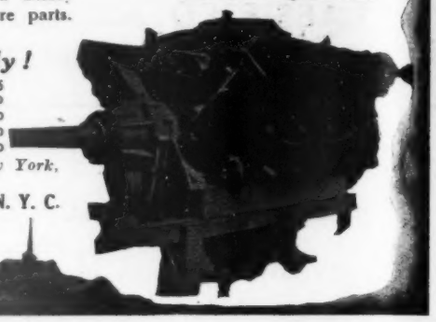

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